AMENDMENTS TO THE CLAIMS

Please amend the claims by canceling claims 10, 16, 19, 26 and 34 without prejudice; amending claims 1, 3, 4, 7-9, 11-15, 17, 18, 20-25, 27-33 and 35, wherein matter to be deleted is shown in strikethrough and matter to be added is shown in underline; and adding new claims 36 - 40 as follows:

1. (currently amended) Apparatus for cleaning residue from a bore of a tube, comprising:

a) a hose having a spray tip containing a plurality of orifices;

b) a water source coupled to said hose and capable of delivering water to said hose at a pressure in excess of 1,000 psi; and

c) a framework supporting i) transport means having a first motor for extending and retracting said hose with a reciprocating motion along a longitudinal drive axis, ii) a reel having a hose storage space concentrically aligned to said longitudinal drive axis and whereat said hose is arranged in coils concentric to said drive axis, and iii) a second motor mounted to said transport means for rotating said transport means, whereby said hose and spray tip are rotated as said hose is collected and dispensed from said reel and as said reel passively follows rotation of said transport means ~~as they extend and retract along a bore of said tube to remove said residue~~.

2. (original) Apparatus as set forth in claim 1 including an operator control gun coupled to said framework and having a bore through which said hose is directed.

3. (currently amended) Apparatus as set forth in claim 36 wherein said first and second motors comprise pneumatic motors, wherein said operator controller comprises a gun coupled to said stationary portion having a bore through which said hose is directed

and including a plurality of pneumatic valves for directing pneumatic flow to direct axial movement of said hose and rotation of said transport means and reel 2 ~~wherein said operator control gun includes a plurality of air valves for directing the operation of said transport means and said reel and thereby the rotation and to and fro movement of said hose~~.

4. (currently amended) Apparatus as set forth in claim 1 wherein said first and second motors comprise air motors ~~3 including a first air motor coupled to rotate said transport means and including a second air motor coupled to axially direct said hose~~.

5. (original) Apparatus as set forth in claim 1 including means for selectively regulating axial hose travel to a range of 2 feet per second to 10 feet per minute.

6. (original) Apparatus as set forth in claim 1 including means for selectively regulating the rotation of said transport means to a range of 10 to 400 RPM.

7. (currently amended) Apparatus as set forth in claim 1 including brake means coupled to said reel for controlling the speed of rotation of said reel relative to said transport means ~~for controlling the rotation of said reel~~ to prevent hose spillage and hose kinking.

8. (currently amended) Apparatus as set forth in claim 7 wherein said brake means comprises a disk brake mounted to said reel and a caliper mounted to said framework ~~and caliper~~.

9. (currently amended) Apparatus as set forth in claim 1 wherein said reel includes a hub mounted concentric to said longitudinal drive axis, a plurality of planar webs radially projecting from said hub and each having a channel extending in parallel

alignment to said longitudinal drive axis ~~mounted to said hub in parallel alignment to said longitudinal drive axis and each having a channel~~, wherein the channels of said webs are aligned to define said storage space, and wherein said transport means includes a tubular member having a bore through which said hose extends ~~member~~ for directing said hose to and from said storage space.

Claim 10. (cancelled)

11. (currently amended) Apparatus as set forth in claim 1 wherein said reel includes a hub mounted concentric to said longitudinal drive axis, a plurality of webs radially projecting from said hub in parallel alignment to said longitudinal drive axis, an endless shroud mounted to said webs in concentric relation to said longitudinal drive axis, and a second shroud displaced from said first shroud to define said storage space therebetween, and wherein said transport means includes a tubular member having a bore through which said hose extends and mounted to direct said hose to and from said storage space ~~mounted to said hub in parallel alignment to said longitudinal drive axis and at least one endless shroud mounted to said webs, whereby said storage space is defined between said webs and said shroud, and wherein said transport means includes a member for directing said hose to and from said storage space~~.

12. (currently amended) Apparatus as set forth in claim 1 wherein said transport means includes a tubular member having a bore through which said hose extends and mounted to direct said hose onto a storage surface of said reel ~~member for storing said hose at said reel in layered coils~~.

13. (currently amended) Apparatus as set forth in claim 1 wherein said transport means includes a plurality of pinch wheels mounted to a support frame, wherein a linkage

coupled to said support frame eccentrically pivots at least one of said pinch wheels to engage and disengage a circumferential surface of each pinch wheel into tangential contact with said hose and a tensioner for independently controlling the contact force of said pinch wheels with said hose.

14. (currently amended) Apparatus as set forth in claim 1 including disc brake means coupled to said reel and control means coupled to said first and second motors and said brake means for synchronously directing the axial and rotational movement of said hose to prevent hose spillage and hose kinking ~~wherein said transport means includes a plurality of pinch wheels mounted to contact said hose and control means for directing the reciprocating axial movement of said hose in synchrony with the rotational movement of said hose~~.

15. (currently amended) Apparatus as set forth in claim 1 wherein said transport means includes a plurality of pinch wheels mounted to a support frame, an eccentric linkage coupled to said support frame to pivot a pivoting one of said pinch wheels relative to a stationary pinch wheel between a first condition whereat the pivoting and stationary pinch wheels are released from contact with said hose and a second condition whereat the pivoting and stationary pinch wheels grip said hose and a tensioner for independently controlling the contact force of said pinch wheels with said hose, such that the tension is unaffected in either of said first and second conditions ~~14 wherein at least one of said plurality of pinch wheels is mounted to pivot relative to a stationary pinch wheel between a first condition whereat said pivoting and stationary pinch wheels are released from contact with said hose and a second condition whereat said pivoting and stationary pinch wheels grip said hose~~.

Claim 16. (cancelled)

17. (currently amended) Apparatus as set forth in claim 13 ~~14~~ wherein each of said plurality of pinch wheels includes a circumferential endless groove located to contain and direct the travel of said hose.

18. (currently amended) Apparatus as set forth in claim 1 wherein said transport means includes a tensioner for selectively controlling the contact force of an idler pulley with a drive belt coupled to said first motor a drive motor between a non-contact position and a tensioned position.

Claim 19. (cancelled)

20. (currently amended) Apparatus for cleaning residue from a bore of a tube, comprising:

a) a hose having a spray tip containing a plurality of orifices;

b) a water source coupled to said hose and capable of delivering water to said hose at a pressure in excess of 1,000 psi;

c) a framework supporting i) transport means having a first motor and including a plurality of pinch wheels mounted to contact and direct said hose along a longitudinal drive axis ~~said hose~~, ii) reel means having a storage space transversely oriented to said longitudinal drive axis for layering said hose into coils concentric to said longitudinal drive axis and distributing said hose along said longitudinal drive axis, and iii) a second motor mounted to said transport means for rotating said transport means as said hose is collected and dispensed from said reel and as said reel passively follows rotation of said transport means; and

d) an operator controller ~~control gun~~ coupled to said framework and having a bore through which said hose is directed and control means for directing movement of said pinch wheels and a reciprocating axial movement of said hose in synchrony with a rotational movement of said hose~~, whereby said hose and spray tip are rotated as they extend and retract to remove residue from a bore of said tube~~.

21. (currently amended) Apparatus as set forth in claim 20 wherein said transport means includes an arm having a bore through which said hose is directed for directing said hose onto said reel~~, wherein said reel means includes a plurality of planar members mounted to a plurality annular bands, wherein a tapered channel extends in each planar member at an acute angle relative to the longitudinal drive axis and wherein said hose is directed by said arm into and from said channel~~.

22. (currently amended) Apparatus as set forth in claim 20 wherein said plurality of pinch wheels are mounted to a support frame having an eccentric linkage coupled to said support frame to pivot a pivoting one of said pinch wheels relative to a stationary pinch wheel between a first condition whereat the pivoting and stationary pinch wheels are released from contact with said hose and a second condition whereat the pivoting and stationary pinch wheels grip said hose and a tensioner for independently controlling the contact force of said pinch wheels with said hose, such that the tension is unaffected in either of said first and second conditions ~~wherein at least one of said plurality of pinch wheels is mounted to pivot relative to a stationary pinch wheel between a first condition whereat said pivoting and stationary pinch wheels are released from contact with said hose and a second condition whereat said pivoting and stationary pinch wheels grip said hose~~.

23. (currently amended) Apparatus as set forth in claim 20 including a disc brake coupled to said reel for controlling the speed of rotation of said reel relative to said transport ~~for controlling the rotation of said reel~~ means to prevent hose spillage and hose kinking.

24. (currently amended) Apparatus as set forth in claim 20 wherein said operator controller comprises an operator gun, and wherein said transport means includes an air swivel for coupling control air signals between said operator gun and said framework to control the rotation of said transport means and axial movement of said hose at said transport means relative to said reel means.

25. (currently amended) Apparatus as set forth in claim 20 wherein said transport means and said reel means are supported from and secured to bearing surfaces at said framework with ~~interconnected~~ clamped bearings.

Claim 26. (cancelled)

27. (currently amended) Apparatus for cleaning residue from a bore of a tube, comprising:

a) a hose having a smooth outer wall and a spray tip containing a plurality of orifices;

b) a water source coupled to said hose and capable of delivering water to said hose at a pressure in excess of 1,000 psi;

c) a framework supporting i) a reel having a hose storage space, ii) transport means having a first motor and an air swivel and a plurality of pinch wheels mounted to contact said outer wall and direct said hose along a ~~said~~ longitudinal drive axis and an

arm for concentrically layering said hose into coils at said storage space about said longitudinal drive axis, and iii) means for rotating said transport means as said hose is collected and dispensed from said reel and as said reel passively follows rotation of said transport means; and

d) an operator controller ~~control gun~~ coupled to said framework and having a bore through which said hose is directed and control means for directing movement of said pinch wheels and a reciprocating axial movement of said hose in synchrony with a rotational movement of said hose~~, whereby said hose and spray tip are rotated as they extend and retract to remove residue from a bore of said tube~~.

28. (currently amended) Apparatus as set forth in claim 27 wherein said plurality of pinch wheels are mounted to a support frame, wherein an eccentric linkage coupled to said support frame to pivot a pivoting one of said pinch wheels relative to a stationary pinch wheel between a first condition whereat the pivoting and stationary pinch wheels are released from contact with said hose and a second condition whereat the pivoting and stationary pinch wheels grip said hose and wherein said transport assembly includes a tensioner for independently controlling the contact force of said pinch wheels with said hose, such that the tension is unaffected in either of said first and second conditions ~~wherein at least one of said plurality of pinch wheels is mounted to pivot relative to a stationary pinch wheel between a first condition whereat said pivoting and stationary pinch wheels are released from contact with said hose and a second condition whereat said pivoting and stationary pinch wheels grip said hose~~.

29. (currently amended) Apparatus as set forth in claim 27 wherein said air swivel has rotating and stationary portions, wherein a plurality of conduits extend from a

remote operator controller and couple to porting at said stationary portion, wherein said rotating portion is coupled to said first motor, wherein said stationary portion is coupled to said second motor and a brake means mounted to said reel for controlling rotation of said reel, whereby said operator controller directs a control media to operate said first and second motors and brake means ~~wherein said transport means includes means for controlling the contact force of said pinch wheels with said hose~~.

30. (currently amended) Apparatus as set forth in claim 27 wherein said transport means and said reel are supported from and secured to bearing surfaces at said framework with ~~interconnected~~ clamped bearings.

31. (currently amended) Apparatus as set forth in claim 27 including a disk brake mounted to said reel and a caliper mounted to said framework and means for controlling said caliper and ~~and means controlling~~ the rotation of said reel to prevent hose spillage and hose kinking.

32. (currently amended) Apparatus as set forth in claim 27 wherein said reel includes a hub mounted concentric to said longitudinal drive axis, a plurality of webs radially projecting from said hub in parallel alignment to said longitudinal drive axis, an endless shroud mounted to said webs in concentric relation to said longitudinal drive axis, and a second shroud displaced from said first shroud to define said storage space therebetween, and wherein said transport means includes a tubular member having a bore through which said hose extends and mounted to direct said hose to and from said storage space ~~mounted to said hub in parallel alignment to said longitudinal drive axis and at least one endless shroud mounted to said webs, whereby said storage space is defined~~

~~between said webs and said shroud, and wherein said transport means includes a member for directing said hose to and from said storage space~~.

33. (currently amended) Apparatus as set forth in claim 27 wherein said transport means is detachably clamped to said framework at said air swivel and is removable as a unit ~~including means for controlling said transport means and said reel to rotate in synchrony with each other and without hose spillage or hose kinking~~.

Claim 34. (cancelled)

35. (currently amended) Apparatus for cleaning residue from a bore of a tube, comprising:

a) a hose having a smooth outer wall and a spray tip containing a plurality of orifices;

b) a water source coupled to said hose and capable of delivering water to said hose at a pressure in excess of 1,000 psi; and

c) a framework supporting i) transport means engaging the outer wall of said hose and having a first motor for extending and retracting said hose with a reciprocating motion, ii) a reel having a hose storage space concentrically aligned to a longitudinal drive axis common to each of said transport means and said reel and whereat said hose is layered into coils concentrically aligned to said longitudinal drive axis, and iii) a second motor mounted to said transport means for rotating said transport means and said reel in synchrony with each other as said hose is collected and distributed, whereby said hose and spray tip are rotated as said hose is collected and dispensed from said reel and as said reel passively follows rotation of said transport means ~~as they extend and retract along a bore of said tube to remove said residue~~.

36. (new) Apparatus as set forth in claim 1 wherein said framework supports a control swivel having rotating and stationary portions, wherein a plurality of conduits extend from a remote operator controller and couple to porting at said stationary portion, wherein said rotating portion is coupled to said first motor, wherein said stationary portion is coupled to said second motor and a brake means mounted to said reel for controlling rotation of said reel, whereby said operator controller directs a control media to operate said first and second motors and brake means.

37. (new) Apparatus as set forth in claim 36 wherein said transport means includes a plurality of pinch wheels mounted to a support frame, an eccentric linkage coupled to said support frame to pivot a pivoting one of said pinch wheels relative to a stationary pinch wheel between a first condition whereat the pivoting and stationary pinch wheels are released from contact with said hose and a second condition whereat the pivoting and stationary pinch wheels grip said hose and a tensioner for independently controlling the contact force of said pinch wheels with said hose, such that the tension is unaffected in either of said first and second conditions and wherein said support frame is mounted to said rotating portion.

38. (new) Apparatus as set forth in claim 37 wherein said transport means is detachably clamped to said framework at said control swivel and is removable as a unit.

39. (new) Apparatus as set forth in claim 36 wherein said transport means is detachably clamped to said framework at said control swivel and is removable as a unit.

40. (new) Apparatus as set forth in claim 1 wherein said transport means includes a pneumatic swivel having rotating and stationary portions, wherein a plurality of conduits extend from a remote operator controller and couple to porting at said stationary

portion, wherein a support frame containing a plurality of pinch rollers, said first motor and a pinch wheel tensioner is mounted to said rotating portion, wherein said stationary portion is coupled to said second motor and a brake means mounted to said reel for controlling rotation of said reel, whereby said operator controller directs air to operate said first and second motors and brake means and including clamp means for detachably retaining said transport means to said framework.